

ENGINEERING ASSOCIATE/SENIOR ENGINEERING ASSOCIATE

Purpose:

To actively support and uphold the City's stated mission and values. To perform a variety of technical tasks involving civil engineering design, field engineering and survey work, inspection, construction management, and design project management.

Supervision Received and Exercised:

Engineering Associate

Receives general supervision from the Engineering Permit Inspection Supervisor, Principal Civil Engineer, Engineering Administrator, or from other supervisory or management staff.

Senior Engineering Associate

Receives direction from the Principal Civil Engineer, Engineering Permit Inspection Supervisor, Engineering Services Manager, or from other supervisory or management staff.

Exercises functional and technical supervision over lower level, and/or temporary staff.

Distinguishing Characteristics:

Engineering Associate

This is the entry-level/training class in the series. This class is distinguished from the Senior Engineering Associate by the performance of more routine duties under close supervision.

Senior Engineering Associate

This is the full journey level class within the series. The Senior Engineering Associate performs the same duties as the Engineering Associate except on larger, more complex

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projects, and requires minimal supervision. Employees in this class perform the full range of duties requiring infrequent instruction or assistance as new or unusual situations arise; incumbents are fully aware of the operating procedures and policies of the City and work units, and are prepared to manage projects.

Positions in these classes are flexibly staffed. Advancement to the Senior Engineering Associate level requires that the employee be satisfactorily performing the full range of duties at the journey level, and that the employee meets the minimum requirements. Note that for existing employees advancement to the Senior Engineering Associate class, NICET Certification, EIT, or appropriate equivalent may substitute for one year of experience.

Essential Functions:

Duties may include, but are not limited to, the following:

- Perform design and construction management activities on capital improvement, private development, and utility projects; assume major responsibility for the design, inspection, testing, and acceptance of large, complex City construction projects to ensure compliance with specifications, plans, codes, and ordinances; approve pay estimates and progress reports, and, initiate change orders.
- Prepare correspondence and maintain contact with outside agencies and organizations.
- Make recommendations for changes in construction standard specifications and details to conform to field conditions.
- Ensure that proper safety standards and traffic control measures are followed.
- Develop and maintain Engineering Policies and Procedures.
- Perform related duties as assigned.

When assigned to the Capital Improvement Section:

 Prepare engineering designs and drawings using sketches, survey field notes, and other engineering data for the computer aided design of a variety of public works projects, including land use, buildings, water and wastewater lines, streets, site grading, and storm drains.

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- Manage the design of City projects completed by internal and external designers; determine procedures to be followed in processing, coordinating, scheduling, and supervising projects from the initial stage of completion.
- For contracted services, negotiate and develop contracts; coordinate the preparation and processing of payments and process funding adjustments as necessary.
- Review engineering calculations, soil reports, drainage reports, plat maps, deeds, legal descriptions, and other contract documents for value, constructability, errors, and omissions.
- Prepare staff summary reports and recommendations for the City Council for various contractual approvals.
- Conduct pre-construction meetings to establish project protocol and compliance with contract documents; and, facilitate construction progress meetings as required.
- Supervise and coordinate construction management activities performed by consultants; meet with contractor and/or project managers for project scheduling and coordination; and, review and process payments to consultants and contractors.
- Maintain inspection records, monitor logs (shop drawing submittals, requests for information, architectural supplemental instructions and change orders), material testing, and any additional project related documents, as required; confer with architects, engineers, contractors, and owners on proposed projects; oversee progress and quality of construction; and, interpret design intent and facilitate solutions.
- Monitor project budgets and schedules; verify quantities; prepare progress reports; estimate construction costs to validate change order proposals; and, process change orders.
- Verify accuracy of as-built information to ensure information is continuously incorporated into the construction contract documents.
- Schedule testing of construction materials at the appropriate time and interpret results.
- Facilitate close-out of project including preparation and completion of punch list items, employee orientations, and equipment start-up procedures; and, establish warranty start-up.
- Provide information to the public concerning assigned engineering projects.

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When assigned to Private Development and Utilities:

- Assume major responsibility for the inspection, testing, and acceptance of offsite improvements (paving, water, sewer, storm drainage and associated private utility improvements) for private development construction projects to ensure compliance with approved plans, specifications, codes, and ordinances.
- Conduct pre-construction meetings to establish project protocol and compliance with contract documents.
- Ensure that proper safety standards and traffic control measures are followed.
- Maintain inspection records, enter inspection data into Permits Plus System and revise data as project status changes.
- Schedule testing of construction materials at the appropriate time and interpret results.
- Coordinate and manage the testing of water lines with the City's Water Utilities
 Department. Interpret test results and reschedule testing as required until passing
 results are achieved. Monitor and ensure that all water quality test and re-test fees
 have been paid by the Contractor.
- Confer with plan reviewers, architects, engineers, contractors and owners on projects to resolve unusual problems in accordance with City codes and standards.
- Provide information to the public concerning assigned engineering projects.
- Respond and resolve complaints and issues related to dust, mud tracking, and public safety.
- Review as-built plans to verify that accurate information is incorporated into the asbuilt plans and to ensure compliance with original plans and specifications.
- Prepare and monitor fees for overtime worked in conjunction with private development and utility work in public rights-of-ways.
- Facilitates close-out of project including preparation and completion of punch list items.
- Coordinate inspection work with other City departments and utilities.

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- Coordinate acceptance and return of offsite bonds taken to guarantee offsite improvement completion.
- Assist in the creation of manuals, policies and other hand-outs to assist contractors.
- Perform related duties as assigned.

When assigned to Information and Technical Services:

- Determine the location and size of required right of way and easements for City street and sidewalk improvement projects, bus stops/shelters, street lighting and traffic signal purposes, and any engineering project specific acquisitions, as needed.
- Negotiate complex right of way and real estate transactions, including commercial, industrial and residential properties; and, draft and analyze real estate documents, including purchase and sale agreements, escrow documents, and title curative documents.
- Prepare Request for Proposals (RFP) for land sales of city-owned property; and, request reports, maps, and right of way documents to ensure accuracy; and, prepare or oversee the preparation of legal descriptions; and, review reports, maps, and right of way documents to ensure accuracy.
- Review appraisal reports of contracted appraisers; and, review Environmental Site Assessment reports of contracted consultants.
- Prepare and process a variety of documents, including: requests for encroachment permits, instruments for abandonment, Ordinances and Resolutions for City Council approval, annexation of territory to increase city limits.
- Advise owner of project purpose and scope, impact to their property and their rights under Federal and State law, City ordinances, and City policies and procedures.
- Recommend condemnation action when property negotiations have reached an impasse; and, work closely with City legal staff to prepare pleadings/filing for eminent domain hearing(s) in court.
- Prepare and maintain complete records of right of way legal descriptions, transactions, deeds, agreements, and other related documents; and, review documents prepared by private firms for City approval.

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- Work with project managers and engineers to resolve owner issues regarding property impacts as a result of City activity.
- Evaluate operations and activities within assigned areas of responsibility; recommend improvements and modifications; prepare various reports on operations and activities; assist in the resolution of work problems; and, interpret administrative policies to contracted employees, other departments, consultants, contractors, and the public.
- Search records for all parties which may have a legal interest in proposed sites; execute the necessary legal documentation; and, meet with legal counsel, City officials, private owners, and appraisers to coordinate projects.
- Participate in the review processing of private development projects; review a variety
 of plans for correctness and compliance with City and County codes pertaining to
 real estate issues.
- Assist in the management of multiple leases (including environmental monitoring wells), involving businesses occupying City right-of-way; and, review and appraise lease fees and revenue structure, as necessary.
- Utilize both in-house and Internet resources for information gathering and research.
- Perform related duties as assigned.

When assigned as the Chief Land Surveyor, within the Information and Technical Services section:

- Complete complex and difficult survey assignments such as street reconstructions, storm drain, sewer, water projects, and structure deformation monitoring.
- Delineates rights of way; conducts topographic surveys for design projects; and, establishes control monuments for property surveys, construction staking, and aerial mapping control.
- Takes accurate notes, records, and sketches of work performed and data secured to document the results of the survey effort.
- Communicates with the general public, other City employees, vendors, management, and contractors to answer questions, resolve problems, and coordinate work assignments.

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- Instructs and trains subordinates in a field and office setting regarding the technical aspects of surveying.
- Utilize geometry, trigonometry, algebra, and other mathematical principles to calculate stake out positions and other survey locations.
- Responsible for all changes of the city coordinate system and all adjustments and corrections to the system.
- Responsible for all measuring devices involved in civil engineering or land surveying disciplines.
- Use a variety of computer programs such as COGO (coordinate geometry), CAD, and data transfer programs to analyze survey results and produce maps and survey data of all types for use by the general public, other City employees, vendors, management, and contractors.
- Plan, organize and direct survey personnel; supervise and evaluate the work of subordinate personnel, such as preliminary and construction surveys.
- May approve minor deviations from plans and specifications; and, conduct research and analysis to ensure surveys are accurate.
- Demonstrate a thorough understanding of construction drawings and interpret the drawings in accordance with MAG standards and legal descriptions.
- Write and interpret legal descriptions.
- Perform related duties as assigned.

Minimum Qualifications:

Experience:

Engineering Associate

Two years of increasingly responsible experience performing a variety of technical civil engineering work.

Senior Engineering Associate

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Four years of increasingly responsible experience performing a variety of technical civil engineering work, (including two years in construction surveying work (when assigned

as Chief Land Surveyor))

Education:

Equivalent to an Associate of Arts Degree from an accredited college or university with major course work in civil engineering or degree related to the core functions of this position.

Licenses/Certifications:

Senior Engineering Associate

When assigned to Private Development and Utilities:

Requires appropriate NICET certification, EIT, or appropriate equivalent may substitute for one year of experience.

When assigned as Chief Land Surveyor:

Must be registered as a Land Surveyor in the State of Arizona by the end of probationary period.

Examples of Physical and/or Mental Activities:

(Pending)

Competencies:

(Pending)

Job Code: 253 / 305

Status: Non-Exempt / Classified